1. Record Nr. UNINA9910227344603321 **Autore** Höppel Heinz Werner (Ed.) **Titolo Ultrafine-Grained Metals** MDPI - Multidisciplinary Digital Publishing Institute, 2017 Pubbl/distr/stampa **ISBN** 3-03842-525-7 Descrizione fisica 1 electronic resource (VIII, 181 pages) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto Ultrafine-grained metallic materials produced by severe plastic deformation methods are at the cutting edge of modern materials science. UFG-metals exhibit outstanding properties which make them very interesting for structural or functional engineering applications. Fifteen articles in this special issue address a broad variety of topics: New developments in severe plastic deformation techniques, advances in modeling and simulation of the severe plastic deformation processes, mechanical properties under monotonic and cyclic loading of homogenous and graded UFG structures, dominating deformation mechanisms in UFG materials, advances and strategies for high conductivity UFG-materials, correlation between severe plastic deformation parameters and resulting materials properties and peculiarities in the corrosion behavior of UFG materials. The book covers latest results on ultrafine-grained titanium, aluminum and copper alloys and on UFG iron and steels and thus provides a deep insight to current research activities in the field of ultrafine-grained metals.